

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of treating substances comprising the steps of:
providing an electrically insulating honeycomb structural body having a plurality of through holes formed therein;

providing a plurality of electrodes, wherein at least a portion of said electrodes comprises a material having catalysis;

generating a pulse corona discharge plasma substantially uniformly within an electrically insulating the entirety of said honeycomb structural body along or across a longitudinal direction of said having a plurality of through holes by applying a discharge voltage across said electrodes, at least a part of the electrodes being made of a metal having catalysis;

flowing providing a fluid containing substances to be treated through and introducing said fluid into said plurality of through holes formed in the of said honeycomb structural body; and

treating the said substances contained in the of said fluid by a reaction with the said pulse corona discharge plasma and by catalysis of at least a part of the said electrodes.

2-4 (Cancelled).

5. (Currently Amended) A method according to claim 51, wherein said pulse corona discharge plasma is generated within the honeycomb structural body such that electrons having sufficiently high are produced that have a sufficiently high energy for decomposing harmful substances such as to effectively decompose dioxins are

produced.

6. (Currently Amended) ~~A~~The method according to claim 5, wherein said electrons ~~having~~have an energy of 3-10 eV ~~are generated by the pulse corona discharge plasma.~~

7. (Currently Amended) ~~A~~The method according to claim 6, wherein said pulse corona discharge plasma is generated by a pulse supply source ~~producing that~~produces a pulse current having a raising edge of not less than 5×10^{10} , particularly 1×10^{11} , amperes per second.

8. (Currently Amended) ~~A~~The method according to claim 7, wherein ~~a corona discharge pulse for generating the pulse corona discharge plasma is generated by said pulse supply source including~~comprises a static induction thyristor as a switching element.

9. (Currently Amended) A method according to claim 1, wherein said pulse corona discharge plasma is generated within ~~the~~said honeycomb structural body in a direction parallel to ~~a~~said longitudinal direction of ~~the~~said through holes.

10. (Currently Amended) A method according to claim 1, wherein said pulse corona discharge plasma is generated within ~~the~~said honeycomb structural body in a direction perpendicular to ~~a~~said longitudinal direction of ~~the~~said through holes.

11-39. (Cancelled).

40. (New) The method according to claim 6, wherein said pulse corona discharge plasma is generated by a pulse supply source that produces a pulse current having a raising edge of not less than 1×10^{11} amperes per second.

41. (New) The method according to claim 9, further comprising the steps of:
providing a first electrode on a first end surface of said honeycomb structural body;

providing a second electrode on a second end surface of said honeycomb structural body; and

applying a pulse supply voltage across said first electrode and said second electrode to generate said pulse corona discharge plasma.

42. (New) The method according to claim 10, further comprising the steps of:

providing a first electrode on said honeycomb structural body;

providing a plurality of wire electrodes in a plurality of said through holes of said honeycomb structural body; and

applying a pulse supply voltage across said first electrode and said wire electrodes to generate said pulse corona discharge plasma.

43. (New) The method according to claim 10, further comprising the steps of:

providing a plurality of first wire electrodes in a first plurality of said through holes of said honeycomb structural body;

providing a plurality of second wire electrodes in a second plurality of said through holes of said honeycomb structural body; and

applying a pulse supply voltage across said first wire electrodes and said second wire electrodes to generate said pulse corona discharge plasma.